

WHAT IS CLAIMED IS:

1. A fastening structure for an antenna module assembly, comprising:
a cover, a gasket inner seal, a circuit board including at least one antenna element, and
a base, wherein:
the gasket inner seal is placed over the circuit board, wherein the gasket inner seal and
circuit board are intermediately located between the cover and the base,
the base includes a plurality of beveled snap-tab receiving portions integrally located
about a base perimeter,
the beveled snap-tab receiving portions engage an inner perimeter of the cover
defined by flexible snap-tabs to fasten and matingly secure the cover to the base.
2. The fastening structure for an antenna module assembly according to Claim 1,
wherein the base retains the circuit board about a base shoulder such that the base shoulder
adjacently opposes a grounding strip located about the perimeter of the circuit board for
electrical coupling.
3. The fastening structure for an antenna module assembly according to Claim 1,
wherein the cover includes outboard ribs and inboard ribs that are located about a front end
perimeter, a rear end perimeter, a side perimeter, and a corner perimeter of the antenna
module assembly.
4. The fastening structure for an antenna module assembly according to Claim 3,
wherein the outboard ribs and inboard ribs extend downwardly from a cover top portion and
bite into an upper portion of the gasket inner seal.
5. The fastening structure for an antenna module assembly according to Claim 4,
wherein an additional rib perimeter comprising lower ribs extend upwardly from a base top
portion bites into a lower portion of the gasket inner seal in an opposing relationship with
respect to the outboard and inboard ribs that bites into the upper portion of the gasket inner
seal.

6. The fastening structure for an antenna module assembly according to Claim 3, wherein the outboard ribs are further defined to include a first thickness and wherein the inboard ribs are further defined to include a second thickness, wherein the first thickness is less than the second thickness.
7. The fastening structure for an antenna module assembly according to Claim 1 wherein the at least one antenna element is a mast antenna element.
8. A fastening structure for an antenna module assembly according to Claim 7, wherein the at least one antenna element further comprises at least one patch antenna element, wherein the mast antenna element and the at least one patch antenna element receives AMPS/PCS signals, SDARS signals, GPS signals, and DAB signals.
9. The fastening structure for an antenna module assembly according to Claim 1 further comprising a gasket outer seal, a retaining clip secured about a locating boss by a screw, and wire leads, which are connected to and extend from the circuit board.
10. The fastening structure for an antenna module assembly according to Claim 9, wherein the gasket outer seal also includes a secondary passage that receives an alignment boss extending from a lower side of the base that extends through a metallic surface to prevent rotation of the antenna module assembly about a common axis.
11. The fastening structure for an antenna module assembly according to Claim 1, wherein the cover includes a Polycarbonate blend or a Polycarbonate-Acrylnitril-Butadien-Styrol-Copolymere blend.
12. The fastening structure for an antenna module assembly according to Claim 1, wherein the gasket inner seal includes a three layer structure including a core layer that is laminated on a core upper side and a core lower side.

DP-310054
65899-0706

13. The fastening structure for an antenna module assembly according to Claim 12, wherein the core layer is Polypropylene and the laminated layers are a silicon foam or rubber.
14. The fastening structure for an antenna module assembly according to Claim 1, wherein the gasket inner seal includes a single core layer comprising foam with an adhesive layer applied to the upper and lower sides of the foam.
15. The fastening structure for an antenna module assembly according to Claim 1, wherein the base includes a plated, casted metallic material.
16. The fastening structure for an antenna module assembly according to Claim 15, wherein the base includes zinc with a trivalent plating.